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10/556,711	11/13/2006	**Kanazawa Ichiro**	051009/303044	5017

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ALSTON & BIRD LLP
BANK OF AMERICA PLAZA
101 SOUTH TRYON STREET, SUITE 4000
CHARLOTTE, NC 28280-4000

EXAMINER	
GIBBS, TERRA C	

ART UNIT	PAPER NUMBER
1635	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/556,711	ICHIRO ET AL.	
	Examiner	Art Unit	
	TERRA C. GIBBS	1635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 November 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) *14 and 17* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6-13,15 and 16* is/are rejected.

7)☒ Claim(s) *5* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 November 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/10/05 and 12/19/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This Office Action is a response to Applicant's Election filed November 6, 2008.

Claims 1-17 are pending in the instant application.

Election/Restrictions

Applicant's election without traverse of Group I (claims 1-13, 15, and 16) in the reply filed on November 6, 2008 is acknowledged.

Claims 14 and 17 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on November 6, 2008.

The requirement is still deemed proper and is therefore made FINAL.

Accordingly, claims 1-13, 15, and 16 have been examined on the merits.

Information Disclosure Statement

Applicant's information disclosure statement filed November 10, 2005 is acknowledged. It is noted that reference 2, Japanese Patent No. JP 7-067661 A, reference 3, Japanese Patent No. JP 2003-503008 A, and reference 5, Goto et al., have not been considered because English translations of the Japanese Documents have not been provided. In this regard, a signed copy of the information disclosure statement filed November 10, 2005 is enclosed herewith, however references 2, 3, and 5 have been lined-through to indicate that the Examiner has not considered these references.

Applicant's information disclosure statement filed December 19, 2007 is acknowledged. The submission is in compliance with the provisions of 37 CFR §1.97. Accordingly, the Examiner has considered the information disclosure statement, and a signed copy is enclosed herewith.

Priority

Receipt is acknowledged of certified papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file. It is noted that the instant application is the national stage entry of PCT/JP04/06360, filed April 30, 2004, which claims foreign priority to 2003-136477, filed May 14, 2003.

Nucleotide Sequence Disclosures

This application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 C.F.R. §1.821(a)(1) and (a)(2). However, this application fails to comply with the requirements of 37 C.F.R. §1.821-1.825 for the reason(s) set forth below. The disclosure contains sequences which fall under the purview of 37 CFR 1.821 through 1.825 as requiring SEQ ID NOs., but which are not so identified. For example, see Figure 1. Applicant must fully comply with the sequence rules for any response to this action to be considered fully responsive.

Drawings

The drawings filed on November 10, 2005 are acknowledged and have been accepted by the Examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, 4, 10, 15, and 16 are rejected under 35 U.S.C. 102(a) as being anticipated by Goto et al. (Applicant's Reference #4 on the Information Disclosure Statement filed November 10, 2005).

Claim 1 is drawn to a double-stranded RNA composed of sense- and antisense-strand RNAs, homologous to a certain sequence targeted against a huntingtin mRNA, which can inhibit huntingtin gene expression. Claims 4 and 10 are dependent on claim

1 and includes all the limitations of claim 1 with the further limitations wherein the certain sequence targeted against a huntingtin mRNA is derived from a region immediately upstream of CAG repeats of exon 1 of a huntingtin gene; and wherein the double-stranded RNA is a huntingtin gene expression inhibitor. Claims 15 and 16 are drawn to a preventive and/or a remedy of Huntington's disease containing as an effective ingredient a huntingtin gene expression inhibitor comprising a huntingtin gene expression inhibitor composed of a double-stranded RNA composed of sense- and antisense-strand RNAs, homologous to a certain sequence targeted against a huntingtin mRNA, and a pharmaceutically acceptable carrier therein.

Goto et al. disclose the suppression of huntingtin gene expression by siRNA. For example, Goto et al. disclose a series of expression constructs of human huntingtin exon 1 with various numbers of CAG repeats was transfected into COS7 cells and siRNA was subsequently used to inhibit expression. Goto et al. also disclose that siRNA suppressed endogenous expression of huntingtin in a human neuroblastoma cell line. Goto et al. conclude that expression of huntingtin is suppressed specifically by siRNA, suggesting that siRNA might be a possible therapeutic tool for Huntington's disease.

Therefore, Goto et al. anticipate claims 1, 4, 10, 15, and 16.

****

Claims 1, 7, 8, 10, 15, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Yen et al. (Annuals of Neurology, 1999 Vol. 46:366-373).

Claims 1, 10, 15, and 16 are as described above. Claims 7 and 8 are dependent on claim 1 and include all the limitations of claim 1 with the further limitations wherein the double-stranded RNA is prepared from synthesized sense- and antisense-strand RNAs; and wherein the double-stranded RNA is prepared from sense- and antisense-strand RNAs by using gene recombination. It is noted that the instant specification, at page 10, first paragraph discloses:

> "The double-stranded RNAs of the present invention are not particularly limited as long as they are comprised of sense- and antisense-strand RNAs homologous to the certain sequence targeted against huntingtin mRNA, which is capable of suppressing the huntingtin gene expression."

Yen et al. disclose double-stranded catalytic enzymes, targeted to human Huntingtin, wherein the catalytic enzymes inhibited the expression of the Huntingtin gene in HEK-293 cells (see Figure 3 and Figure 5). It is noted that the catalytic enzymes were transfected in the presence of LipofectAMINE, which represents a pharmaceutical acceptable carrier (see page 367, first column).

Therefore, Yen et al. anticipate claims 1, 7, 8, 10, 15, and 16.

****

Claims 1, 3, 7-10, 12, 13, 15, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 7,320,965 ('965).

Claims 1, 7, 8, 10, 15, and 16 are as described above. Claims 3, 9, 12, and 13 are dependent on claim 1 and include all the limitations of claim 1 with the further limitations wherein the certain sequence targeted against a huntingtin mRNA is a base sequence composed of 19 to 24 base pairs; wherein the sense- and antisense-strand

RNAs generated by using gene recombination are prepared by obtaining RNAs which are generated by introducing an expression vector incorporated DNA capable of transcribing respectively the RNAs, into a host cell; wherein the huntingtin gene expression inhibitor is composed of a complex formed from the double-stranded ribonucleic acid and a positively-charged ribozyme/lipid; and wherein the huntingtin gene expression inhibitor is composed of an expression vector incorporating a DNA capable of transcribing the double-stranded RNA.

'965 discloses and claims double-stranded ribonucleic acid for inhibiting the expression of a human Huntingtin gene in a cell (see claim 1, for example). '965 also discloses and claims that the double-stranded ribonucleic acid comprises a pharmaceutically acceptable carrier (see claim 5, for example). '965 also discloses that the double-stranded ribonucleic acid complexes with a lipid to enhance cellular uptake and cellular distribution. '965 also discloses a vector comprising a regulatory sequence operably linked to a nucleotide sequence that encodes at least one strand of one of the double-stranded ribonucleic acid of the invention and vectors for inhibiting the expression of the huntingtin gene in a cell.

Therefore, '965 anticipate claims 1, 3, 7-10, 13, 15, and 16.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-4, 6, 7, 10, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haque et al. (Experimental Neurology, 1997 Vol. 144:139-146), in view of GenBank Accession No. L12392, and Hammond et al. (Nature Reviews, 2001 Vol. 2:110-119).

Claim 1 is drawn to a double-stranded RNA composed of sense- and antisense-strand RNAs, homologous to a certain sequence targeted against a huntingtin mRNA, which can inhibit huntingtin gene expression. Claims 2-4, 6, 7, and 10 are dependent on claim 1 and include all the limitations of claim 1 with the further limitations wherein the certain sequence targeted against a huntingtin mRNA comprises an RNA derived from a base sequence shown in SEQ ID NO:1 in the sequence listing; wherein the certain sequence targeted against a huntingtin mRNA is a base sequence composed of 19 to 24 base pairs; wherein the certain sequence targeted against a huntingtin mRNA is derived from a region immediately upstream of CAG repeats of exon 1 of a huntingtin gene; wherein the dsRNA is prepared from synthesized sense- and antisense-strand

RNAs; wherein one or few bases in the dsRNA are deleted, substituted, or added in a base sequence shown in SEQ ID NO:3 in the sequence listing, and the complementary base sequence thereof; and wherein the double-stranded RNA is a huntingtin gene expression inhibitor. Claims 15 and 16 are drawn to a preventive and/or a remedy of Huntington's disease containing as an effective ingredient a huntingtin gene expression inhibitor comprising a huntingtin gene expression inhibitor composed of a double-stranded RNA composed of sense- and antisense-strand RNAs, homologous to a certain sequence targeted against a huntingtin mRNA, and a pharmaceutically acceptable carrier therein.

Determining the scope and contents of the prior art

Haque et al. teach an antisense oligonucleotide targeted to the first exon of the Huntingtin gene. For example, Haque et al. teach a synthetic 18-mer antisense oligonucleotide targeted to the ATG start site of murine huntingtin gene in which the CAG repeat region is found in the first exon and in the oligonucleotide sequence (see Figure 1). Haque et al. also teach that the antisense oligonucleotide was conjugated to a fluorescein label and inhibited huntingtin gene expression *in vivo* (see Figures).

Ascertaining the differences between the prior art and the claims at issue

Haque et al. do not teach a dsRNA composed of sense- and antisense-strand RNAs. Also, Haque et al. do not teach wherein the certain sequence targeted against a huntingtin mRNA comprises an RNA derived from a base sequence shown in SEQ ID NO:1 in the sequence listing.

GenBank Accession Number L12392 teaches the human huntingtin gene. It is

noted that the sequence disclosed by GenBank Accession Number L12392 comprises all of SEQ ID NO:1 of Applicant's invention, where the first 584 nucleotides of GenBank Accession Number L12392 comprises exon 1 of the human huntingtin gene.

Hammond et al. teach that antisense and RNA interference are two methods of silencing expression of a gene and that RNA interference possesses characteristics that make it superior to antisense. For example, on page 110, first column, Hammond teaches that antisense methods are straightforward but suffer from "questionable specificity and incomplete efficacy". RNA interference on the other hand, "has been shown in diverse organisms to inhibit gene expression in a sequence-specific manner" (same page and column) and requires only a few molecules of dsRNA per cell to silence expression. Hammond also teaches that the RNA interference phenomenon in animals was discovered by researchers who were using antisense techniques and found that the use of double-stranded instead of single-stranded RNAs reduced gene expression tenfold more efficiently (see paragraph bridging pages 110-111).

Resolving the level of ordinary skill in the pertinent art

The level of ordinary skill in the pertinent art is considered to be high, being a graduate student or post-doctoral fellow in a biological science.

Considering objective evidence present in the application indicating obviousness or nonobviousness

It would have been *prima facie* obvious to one of ordinary skill in the art, at the time the invention was made to make a double-stranded RNA composed of sense- and antisense-strand RNAs, homologous to a certain sequence targeted against a huntingtin mRNA, which can inhibit huntingtin gene expression using the teachings of

Haque et al. and following the teachings and motivation of Hammond et al. It would have been *prima facie* obvious to one of ordinary skill in the art, at the time the invention was made to have the certain sequence targeted against a huntingtin mRNA comprises an RNA derived from a base sequence shown in SEQ ID NO:1 in the sequence listing using the teachings and motivation of Haque et al. and since the sequence was known in the art at the time of filing (see GenBank Accession Number L12392). It would have been *prima face* obvious to one of ordinary skill in the art, at the time the invention was made to have one or few bases in the dsRNA are deleted, substituted, or added in a base sequence shown in SEQ ID NO:3 in the sequence listing using the teachings of GenBank Accession Number L12392.

One of ordinary skill in the art would have been motivated to make a double-stranded RNA composed of sense- and antisense-strand RNAs, homologous to a certain sequence targeted against a huntingtin mRNA, which can inhibit huntingtin gene expression since Haque et al. taught that an antisense oligonucleotide targeted to huntingtin is useful in uncovering the role of huntingtin in neuronal death. One of ordinary skill in the art would have been motivated to target a certain sequence targeted against a huntingtin mRNA comprises an RNA derived from a base sequence shown in SEQ ID NO:1 in the sequence listing since Haque et al. taught the desire to target this region with an antisense oligonucleotide. One of ordinary skill in the art would have been motivated to substitute the antisense oligonucleotide that inhibits expression of the Huntingtin gene taught by Haque et al. with a dsRNA that inhibits expression of the Huntingtin gene as claimed in Applicant's invention because it is obvious to substitute

one functional equivalent for another, particularly when they are to be used for the same purpose. See MPEP 2144.06. Further, one of ordinary skill in the art would have been motivated to substitute the antisense oligonucleotide that inhibits expression of the Huntingtin gene taught by Haque et al with a dsRNA that inhibits expression of the Huntingtin gene as claimed in Applicant's invention since Hammond et al. taught that siRNA are more preferred over traditional antisense technology.

One of ordinary skill in the art would have been motivated to have one or few bases in the dsRNA deleted, substituted, or added in a base sequence shown in SEQ ID NO:3 in the sequence listing since GenBank Accession Number L12392 taught the sequence of the human huntingtin gene and the addition of bases to the base sequence of SEQ ID NO:3 in the sequence listing could generate a full length antisense cDNA of exon 1 that could be used as inhibitor of Huntingtin gene expression.

One of ordinary skill in the art would have had a reasonable expectation of success of making a double-stranded RNA composed of sense- and antisense-strand RNAs, homologous to a certain sequence targeted against a huntingtin mRNA, which can inhibit huntingtin gene expression since Haque et al. taught the successful use and design of an antisense oligonucleotide that inhibits expression of Huntingtin gene and the substitution of one known element for another would have yielded predictable results at the time of the invention.

Therefore, the invention would have been *prima facie* obvious to one of ordinary skill in the art at the time of filing.

******

Claims 1 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haque et al. (Experimental Neurology, 1997 Vol. 144:139-146), in view of Hammond et al. (Nature Reviews, 2001 Vol. 2:110-119), and Schwartz et al. (Current Opinion in Molecular Therapeutics, 2000 Vol. 2:162-167).

Claim 1 is drawn to a double-stranded RNA composed of sense- and antisense-strand RNAs, homologous to a certain sequence targeted against a huntingtin mRNA, which can inhibit huntingtin gene expression. Claim 11 is dependent on claim 1 and include all the limitations of claim 1 with the further limitation wherein the double-stranded RNA is a huntingtin gene expression inhibitor composed of a fusion product, wherein the double-stranded RNA is added to a TAT sequence.

Determining the scope and contents of the prior art

Haque et al. teach an antisense oligonucleotide targeted to the first exon of the Huntingtin gene. For example, Haque et al. teach a synthetic 18-mer antisense oligonucleotide targeted to the ATG start site of murine huntingtin gene in which the CAG repeat region is found in the first exon and in the oligonucleotide sequence (see Figure 1). Haque et al. also teach that the antisense oligonucleotide was conjugated to a fluorescein label and inhibited huntingtin gene expression *in vivo* (see Figures).

Ascertaining the differences between the prior art and the claims at issue

Haque et al. do not teach a dsRNA composed of sense- and antisense-strand RNAs. Also, Haque et al. do not teach the double-stranded RNA is added to a TAT sequence.

Hammond et al. teach that antisense and RNA interference are two methods of

silencing expression of a gene and that RNA interference possesses characteristics that make it superior to antisense. For example, on page 110, first column, Hammond teaches that antisense methods are straightforward but suffer from "questionable specificity and incomplete efficacy". RNA interference on the other hand, "has been shown in diverse organisms to inhibit gene expression in a sequence-specific manner" (same page and column) and requires only a few molecules of dsRNA per cell to silence expression. Hammond also teaches that the RNA interference phenomenon in animals was discovered by researchers who were using antisense techniques and found that the use of double-stranded instead of single-stranded RNAs reduced gene expression tenfold more efficiently (see paragraph bridging pages 110-111).

Schwartz et al. teach the use of versatile and efficient peptides, such as TAT sequences to deliver antisense to cells both *in vitro* and *in vivo* (see Abstract, for example).

Resolving the level of ordinary skill in the pertinent art

The level of ordinary skill in the pertinent art is considered to be high, being a graduate student or post-doctoral fellow in a biological science.

Considering objective evidence present in the application indicating obviousness or nonobviousness

It would have been *prima facie* obvious to one of ordinary skill in the art, at the time the invention was made to make a double-stranded RNA composed of sense- and antisense-strand RNAs, homologous to a certain sequence targeted against a huntingtin mRNA, which can inhibit huntingtin gene expression using the teachings of Haque et al. and following the teachings and motivation of Hammond et al. It would

have been *prima facie* obvious to one of ordinary skill in the art, at the time the invention was made to have the double-stranded RNA added to a TAT sequence using the teachings and motivation of Schwartz et al.

One of ordinary skill in the art would have been motivated to make a double-stranded RNA composed of sense- and antisense-strand RNAs, homologous to a certain sequence targeted against a huntingtin mRNA, which can inhibit huntingtin gene expression since Haque et al. taught that an antisense oligonucleotide targeted to huntingtin is useful in uncovering the role of huntingtin in neuronal death. One of ordinary skill in the art would have been motivated to substitute the antisense oligonucleotide that inhibits expression of the Huntingtin gene taught by Haque et al. with a dsRNA that inhibits expression of the Huntingtin gene as claimed in Applicant's invention because it is obvious to substitute one functional equivalent for another, particularly when they are to be used for the same purpose. See MPEP 2144.06. Further, one of ordinary skill in the art would have been motivated to substitute the antisense oligonucleotide that inhibits expression of the Huntingtin gene taught by Haque et al. with a dsRNA that inhibits expression of the Huntingtin gene as claimed in Applicant's invention since Hammond et al. taught that siRNA are more preferred over traditional antisense technology. One of ordinary skill in the art would have been motivated to have the double-stranded RNA added to a TAT sequence since Schwartz et al. taught that peptide-mediated cellular delivery, such a TAT sequences reduces the need to alter genes or the genome.

One of ordinary skill in the art would have had a reasonable expectation of

success of making a double-stranded RNA composed of sense- and antisense-strand RNAs, homologous to a certain sequence targeted against a huntingtin mRNA, which can inhibit huntingtin gene expression since Haque et al. taught the successful use and design of an antisense oligonucleotide that inhibits expression of Huntingtin gene and the substitution of one known element for another would have yielded predictable results at the time of the invention.

Therefore, the invention would have been *prima facie* obvious to one of ordinary skill in the art at the time of filing.

Conclusion

No claims are allowable.

Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims. Claim 5 is considered to be free of the prior art since the prior art does not teach or fairly suggest a double-stranded RNA composed of sense- and antisense-strand RNAs, homologous to a certain sequence targeted against a huntingtin mRNA, which can inhibit huntingtin gene expression, wherein the certain sequence targeted against a huntingtin mRNA comprises an RNA derived from a base sequence shown in SEQ ID NO:1, wherein the RNA derived from a base sequence shown in SEQ ID NO:1 is an RNA derived from a region immediately upstream of CAG

repeats of exon 1 of a huntingtin gene composed of base sequence shown in SEQ ID NO:3 and SEQ ID NO:4 of the sequence listing.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terra C. Gibbs whose telephone number is 571-272-0758. The examiner can normally be reached on 9 am - 5 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James “Doug” Schultz can be reached on 571-272-0763. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

November 20, 2008
/Terra Cotta Gibbs/